Crime and Circumstance:
The Effects of Infant Health Shocks on Fathers' Criminal Activity

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Many studies in the economics literature have evaluated the effects of economic conditions on criminal behavior, but few have assessed the effects of changes in personal circumstances on individuals' criminal behavior. A "shock" in life circumstances, such as a natural or personal disaster, could reduce or sever a person's connections to his/her family, job, or community. With fewer connections, crime may become a more attractive option.

Several studies in the sociological literature have examined the effects of "turning points," such as marriage or the birth of a child, on criminality. A key issue that arises in trying to estimate effects of life events or turning points is that the source or direction of causality can be difficult to ascertain. If marriage and criminality are negatively related, for example, a number of potential explanations could explain the association. It is possible that marriage strengthens ties to one's community which reduce criminality, but it is also possible that intentions to reduce or desist from criminal activity affect the decision to marry. Another potential explanation is that individuals with specific characteristics (such as emotional maturity) tend to refrain from criminal behavior *and* forge family and community ties. Because marriage and criminal behavior are both decisions made by the individual, it is difficult to ascertain whether one causes the other or whether a "third factor" causes both. Observing the effects of an exogenous event (a random shock) would help considerably in circumventing this methodological problem. In this study, we

do just that. Exploiting a dataset with information from both survey and medical records, we estimate the effects of the birth of a child with a serious health problem (versus the birth of a healthy infant) *that is considered random in the population* on the likelihood that the child's father is convicted or incarcerated after the birth of the child, holding constant his prenatal criminal activity.

Data

We use data from a recent national birth cohort survey that have been linked to medical records of mother respondents and their babies. The Fragile Families and Child Wellbeing (FFCWB) survey follows a cohort of parents and their newborn children in 20 large U.S. cities (in 15 states). The study was designed to provide information about the conditions and capabilities of new (mostly unwed) parents; the nature, determinants, and trajectories of their relationships; and the long-term consequences for parents and children of welfare reform and other policies.

The FFCWB study randomly sampled births in 75 hospitals between 1998 and 2000. Additional data have been collected from the hospital medical records (from the birth) for a sub-sample of 3517 births in 19 cities (in 13 states). Measures of census tract-level poverty were linked to the data using the parents' baseline addresses, whether they lived apart or together. Follow-up interviews were conducted over the telephone with mothers when the child was one and three years old.

The enhanced Fragile Families data are well suited for analyzing the effects of an infant health shock on the father's criminal activity. They were collected as part of a longitudinal birth cohort study, and include: (1) detailed data on the child's health from birth; (2) information about the father's criminal history; (3) measures of human capital (e.g., both parents' educational

attainment); (4) detailed socio-economic data on the fathers regardless of whether they lived with their children; and (5) detailed information on the parents' relationship status, living arrangements, and other children (together and with other partners) at the time of the birth.

Model

An individual will commit a crime if the expected benefits outweigh the expected costs—a classic utility maximization decision. The expected costs of committing a crime are negatively related to the probability of arrest, the probability of punishment, and the expected penalty if convicted. The benefits depend on the expected returns to crime compared to those from legal employment. The economic literature on criminal behavior has focused, for the most part, on the effects of criminal justice sanctions. Some studies have looked at the effects of wages or unemployment on criminal behavior.

Although the specific models vary across studies, most posit a supply of offenses function as:

(1) $O = f(pr, C_p, w_l, w_i, W)$

Here, the number of offenses committed (O) is a function of the probability of detection (pr), the expected cost to the offender of punishment (C_p), the wage in the legal sector (w_l), the wage in the illegal sector (w_i), and the potential offender's wealth (W). In our case, we focus on the effects of an adverse event—an infant health shock—that does not affect the individual's opportunities to engage in work activities. That is, we are not considering negative events such as a downturn in the business cycle.

An adverse event, such as the illness or death of a loved one, could affect several of the arguments in equation (1). First, it could reduce the value of time spent out of incarceration. This occurs if the expected cost of punishment is decreased because the disutility from incarceration is

decreased. Second, an adverse event would decrease real wealth, and the income effect would spur greater work effort (legal or illegal). Third, an adverse event that has the potential for increasing eligibility for public support may cause the individual to substitute illegal work for legal work. Thus, adverse events could decrease the cost of punishment to the individual, raise the marginal utility of income through a wealth effect, and/or lead to a substitution of illegal for legal work. In all cases, the expected effect of the adverse event would be to increase the individual's incentive to commit criminal behavior.

It is also possible that an adverse event increases the value of time spent in household production, and thereby reduces both legal and illegal work effort. We hypothesize that fathers who experience the shock of having a seriously unhealthy infant will be more likely to engage in criminal activity than fathers with healthy children.

Implications

If we find that exogenous shocks in infant health make fathers more likely to engage in criminal activity than those with healthy infants, the results will have both specific and broad implications. On a micro level, the findings would suggest that postnatal programs for high-risk infants that focus on the medical and developmental needs of children while providing emotional support to their mothers should also reach out to the children's fathers—even those who are not married to or living with their child's mother. On a broader level, evidence that adverse shocks in personal circumstances increase criminality would suggest that catastrophic events on a large scale, such as natural disasters, may cause increases in crime for entire cohorts or communities (such as that observed after Hurricane Katrina), and that more research on the extent, magnitude, and duration of the effects is warranted.